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COVER STORY

All is not quiet on the Western Front. Please see Page 22.

COVER ILLUSTRATION BY BOB BERNSTEIN

Why Can't Germany Compete? 22
Could the U.S. market be a bellwether for what could occur in Europe?
by John McElroy

DEPARTMENTS

5 Editorial
9 Harbour
11 Keller
14 Newsline
20 Cars Worth Noting
26 Japan Report
29 Europe Report
48 Rivard
T-2 Richards
64 Letters
76 Windecker

FEATURES

New Stuff For '93 30
The hard hitting hardware and software your competition has.
by Lindsay Brooke, Gary Kubi, John McElroy and Christopher A. Sawyer

The (Business) Case for Viper 36
Chrysler can recoup its $50 million with first 3000 Vipers.
by John McElroy

A Formula For Success 40
A new farm system for car companies — Formula SAE.
by Christopher A. Sawyer

Engines By Ilmor 45
Mario Ilien powers into design of production engines.
by Christopher A. Sawyer

ELECTRONICS

Electric Cars: Audio 53
Electric car radios drive weight and power to new lows.
by Gary Kubi

CAD/CAM

Cubital's Unknown Solider 54
This solid modeling system assembles as it builds.
by Gary Kubi

TRUCK & OFF-HIGHWAY

(NOT FOUND IN ALL ISSUES)

Can You Dig It? T-5
Rad rounded body panels featured in Kobelco's new Coupe series.
by Lindsay Brooke

Mid-Size ABS T-8
New Bendix system targets improved wheel control.
by Lindsay Brooke

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COVER STORY

German automakers are making the same blunders Detroit made a decade ago.

Why can't Bu

by JOHN McELROY

In 1980 German automakers held a pre-eminent position in the US market. Mercedes-Benz had long eclipsed Cadillac as the pinnacle of luxury and prestige. BMW was becoming the chic choice of every young upwardly mobile professional. And VW commanded $2000 premiums on diesel Rabbits that many Americans saw as the answer to spiraling fuel prices. As far as Detroit was concerned, the Germans posed nearly as much of a threat as the Japanese.

But only a decade later German automakers faded from their lofty position in the American market. As the German mark strengthened against the dollar, as Japanese automakers entered the luxury market, and when US tax law changes in 1986 made it difficult for individuals to write off pricy luxury cars, the Germans suddenly found themselves uncompetitive.

VW gave up trying to assemble cars in the US and last year it saw its sales slide to their lowest levels since the 1960s. From their peak in the mid-1980s, Mercedes sales have dropped 35%; BMW 50%; Audi 75%. Porsche struggled to sell a meager 4400 cars here in 1991.

German automakers are asking themselves, "What went wrong?" But their darkest fear is that the US market will prove to be a bellwether for what could occur in Europe.

"The United States is the largest, most competitive and dynamic consumer market in the world," noted Eberhard von Kuenheim, BMW's chairman, as he announced his company's plan to build a $250-300 million assembly plant near Spartanburg, South Carolina. BMW believes that if it can not shore up its position in the US market, it will ultimately suffer the same fate in Europe. And BMW believes that building an assembly plant in the US will enable it to introduce new labor-saving techniques and obtain lower non-union wages that it can't get in Germany.

Mercedes-Benz is betting that its new 2.2 million ft² assembly plant in Rastatt, Germany is the answer to its Japanese competition. "On a promenade through this exemplary model plant you can see what the future will actually look like," bragged Werner Niefer, president and CEO of Mercedes-Benz AG at the inauguration of the plant.

But are the Germans on the right track? These 'solutions' have a haunting ring to them. They are exactly the same approaches the Big Three undertook in the early 1980s, namely, moving manufacturing operations to lower-cost locations overseas, and making huge investments in new, high-tech facilities. In retrospect, most American executives recognize this was a strategic mistake. They didn't attack their problems head-on. Instead, they tried to manage their problems, or buy their way out of them.

There is no question German automakers face formidable barriers in their home market. German auto workers are represented by I.G. Metall, a strong centralized union that bargains for all production workers at all skill levels (line workers, machinists, etc.) throughout the

The Mercedes-Benz's Rastatt plant is far less efficient than Toyota's Lexus plant.

Why can't they compete?

country. Every German company also has a dual board: a management board and an supervisory board. The workers are represented on the supervisory board and if it opposes a management decision, management can be forced to rescind or reconsider its position.

This has provided German workers with a standard of living that is the envy of autoworkers the world over, but are a headache for the car companies. Not only do these workers enjoy one of the highest hourly wages in the world, total labor costs to German automakers, including social costs, are roughly $40 an hour. And though Chrysler's labor costs are also $40 an hour, German workers only work an average of 37 hours a week compared to 40 hours in the U.S. The new I.G. Metall contract will drop that to 35 hours a week next year. Moreover, German workers also get 30 days paid vacation a year starting from the day they walk in the door. And that doesn't include 12 paid holidays. Add up the shorter work week, the generous vacation allowance and liberal, recuperation time off for any medical problems and it equals an absenteeism rate of 20% to 25%.

Even major suppliers are now voicing doubts about investing in Germany. "We have grave concerns about Germany's ability to remain competitive given the recent labor agreements, pending social legislation and other things we see on the horizon," says George Schneider, vp of TRW's engine and aftermarket group. Just as General Motors, Ford and Chrysler blamed their non-competitiveness on high wages and too much time off, German automakers have vented their frustration at their hourly workforce. But critics think that German management should be focusing its attention on more serious problems over which it has direct control.

"BMW, Mercedes, VW, Audi, Porsche, Opel and Ford had better all address their problems in Germany. The biggest issue facing the Europeans today is to design for assembly and design for manufacturing. And they have to address how they process a vehicle. When you keep processing a vehicle with low first-time quality, you add so many redundant facilities the plant costs an arm and a leg," says Jim Harbour, a manufacturing consultant (and *AI* columnist) in Troy, MI.

Mercedes' new $1.6 billion assembly plant in Rastatt did indeed cost an arm and a leg, but it represents Mercedes' plan to become more competitive. The plant is organized into groups of 8 to 12 workers who assume responsibility for quality, throughput, the work pace, and other duties. They are also trained in continuous improvement to eliminate waste and re-work.

"In Rastatt we will prove that it can by all means be economically viable to produce motor vehicles in Germany and with a German workforce," said Jurgen Hubbert, a member of the Board of Management at Mercedes-Benz AG and responsible for the passenger car division.

Automotive Industries toured the Rastatt plant a month ago, a tour which revealed serious questions about the

Productivity Comparison

COMPANY	PLANT	EMPLOYMENT	DAILY OUTPUT	(sq.ft.) PLANT SIZE	(est.) MAN-HOURS
Toyota	Tahara	2500	1500	N.A.	13
Ford	Wixom	3735	800	4.2 million	37
Cadillac	Hamtramck	3050	486	3.2 million	50
BMW	Spartanburg	2000	300	1.9 million	53
Mercedes-Benz	Rastatt	5500	360	2.2 million	122

(This chart does not take sourcing content or assembly sites into account. It only looks at final assembly. Nonetheless, it indicates German automakers are the least efficient.)

plant's competitive standing. To ensure that mistakes are caught at the source, each group works on a car in an assembly bay where they can take all the time they need to build it right. But that means the line has been slowed to a snail's pace. At full production it will make only 23 cars an hour.

But even with that slow line rate, the Rastatt plant uses an astonishingly high number of workers. Fifty-five hundred workers will build only 360 cars a day. *Automotive Industries* estimates that the Rastatt plant would have to eliminate more than 4000 of those employees to match the efficiency of Toyota's Lexus plant in Tahara, Japan (see Japan Report on p.26 in this issue).

Even if Mercedes specifically designed its cars for ease of manufacturing or assembly, it's hard to fathom how Rastatt could match Tahara's efficiency. The work bay concept dictates a tremendous amount of wasted movement in the plant. Cars are moved from one bay to another by automated guided vehicles (AGVs), then are moved to assembly lines, after which they go for more AGV rides. Each car is picked up and moved at least 25 times.

"Clearly they have spent a fortune on the plant and particularly on that equipment to move the cars around. That's going to make the plant suffer a cost penalty for quite an amount of time," says Professor Daniel Jones of the University of Wales and one of the authors of "The Machine That Changed The World."

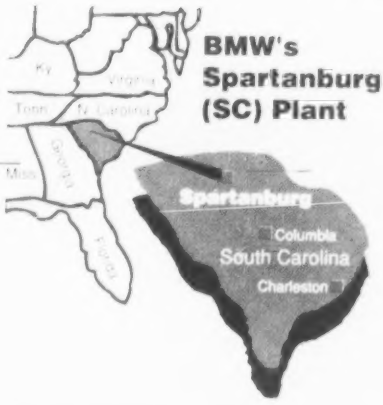
"Plus, there are two big question marks. One has to do with the commitment to a very long work cycle, which fits our description of craftsmanship, but doesn't build in sufficient skill to problem solving—you're doing far too many tasks to be skilled at any of them. Second, how do you assure the pressure and consistency to perform without the discipline of the assembly line? Maybe they can find something that replicates that, but I haven't seen it yet."

When its Spartanburg plant opens in 1995 to annually build 60,000 roadsters based on the 3-series platform, BMW hopes to introduce totally different assembly methods than it uses in Germany.

And by any measure it will be more efficient than Rastatt. Whereas the Mercedes plant will use 5500 employees to assemble 360 cars a day, the BMW plant will use 2000 employees to assemble 300 cars a day. Rastatt will cover 2.2 million ft². Spartanburg will cover 1.9 million. And while Mercedes will sink $1.6 billion into Rastatt, BMW only plans to invest up to $300 million.

"This new facility is going to be state-of-the-art. It's going to have all the new concepts BMW has learned from all the automakers around the world. You can play around with plant in Ragensburg, Germany forever, but you're still trying to work with the existing puzzle," says Robert Ady, president of PHH Fantus, a business location consulting firm that helped BMW weed out 250 potential sites around the world over a three-year period, until it settled on Spartanburg.

BMW is likely to cut costs by sourcing parts and components in the US that are cheaper than they are in Europe including stampings, frames, seats, fasteners, transmissions, glass, and interior and exterior trim. But the real savings will come from how BMW will run the plant itself.



BMW's assembly plant in Spartanburg, South Carolina will save $3000 car in labor costs; $400 car in lower wage rates.

"They've made some pretty sound decisions. This will be a new car, and is supposed to be designed for assembly. Most of their cars in Germany take 115 man-hours to build, but the Spartanburg plant is planned in the long run for 40 hours a car at 72,000 cars a year. Total labor costs, at $26 to $28 an hour, will be comparable to the Japanese transplants. They're going to save $3000 per car in having fewer labor hours and they're going to save $400 per car in lower labor rates," says manufacturing consultant Harbour.

BMW plans to export at least half of the plant's production overseas, which will earn it kudos for making a positive contribution to the US trade balance. And the company is keenly aware that the pending North American Free Trade Agreement could allow it to ship freely into the Mexican market. By lowering its costs with a US plant, the company stands a much better chance of competing in developing countries.

"The most favorable interpretation that you could put on this experiment is that it will challenge BMW to expand its thinking beyond Germany. They'll gain a lot from exposure to the toughest market and the most competitive manufacturing environment. The lessons that they can learn will be quite significant and will come back home. They're building in competitive pressures in the company which will force things to change a bit faster in Germany," says Professor Daniel Jones.

Even though BMW seems to have found the answer to many of its problems by building a plant in the US, clearly that approach will not solve the problems facing the German auto industry. A decade ago American automakers also thought outsourcing overseas was the quick-fix they needed to compete with the Japanese. But all that did was re-direct resources that should have been used at home, attacking the big problems that were strangling the American auto industry.

Today, of course, the American industry has outstripped the European automakers in efficiency. But that change came over an excruciatingly long time, and with brutal social and economic damage. Germans would do well to study the American's mistakes and avoid them. But perhaps old habits just die hard.

"It's too early to write the Germans off," says Professor Jones. "But they will suffer some more, and there will be tens of thousands of people who will leave the industry. The Germans may be where the Americans were 10 years ago, but unlike the boom in the market and profits the Americans enjoyed in the mid-1980s, this time the pressure will be sustained. The Germans won't be able to relax." AI